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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,908	02/05/2004	Seock-Hwan Kang	21C-0086	8595
23413 7590 05/13/2008 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER				
ALEMU, EPHREM				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/773,908

Applicant(s)

KANG ET AL.

Examiner

Ephrem Alemu

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-64 is/are pending in the application.
4a) Of the above claim(s) 2-4, 13, 18-24, 29, 38, 42-45, 47, 51 and 54-64 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 12, 15-18, 25-28, 30-41, 46, 48-50, 52 and 53 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-949)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 8-10, 12 and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Germeshausen (US 2,756,361).

Re claims 1, 5, 9 and 10, Germeshausen discloses a lamp (i.e., gaseous-discharge device) for emitting light (Fig. 1) comprising:

a lamp body (1) in which a discharge gas is injected (Figs. 1-10; Col. 1, lines 15-23; Col. 1, line 67- Col. 2, line 8);

first and second electrodes (2, 3) disposed at opposite end of the lamp body (1), the first and second electrodes (2, 3) receiving current externally provided (Fig. 1), wherein the first electrode (2 or 3) includes:

a first conductive member (i.e., metal cap or disk 16) that receives a first end portion of the lamp body (1) (Figs. 1, 7; Col. 2, lines 9-26; wherein the first member of the first electrode has a tube shape having opposite ends of which one is open and the other is closed); and

a second member (i.e., metal coating or layer 8) disposed between the first member (i.e., metal cap or disk) and the lamp body (1), the second member (i.e., metal coating or layer) being coated on the first end portion of the lamp body to provide adhesion between the first member (i.e., metal cap or disk 16) and the lamp body (1) (Figs. 1-10; Col. 2, lines 14-26 & 30-47; Col. 3,

line 14- Col. 4, line 40; wherein the second member of the first electrode is airtightly formed to prevent a void gap between the first member (i.e., metal cap or disk 16) and the lamp body (1); wherein the size of entire inner surface of the first member (i.e., metal cap or disk 16) of the first electrode is substantially identical with a size of entire outer surface of the second member (i.e., metal coating or layer) of the first electrode; wherein the second member (i.e., metal coating or layer 8 maybe silver or other metal) of the first electrode has a melting point lower than a melting point of the first member (i.e., metal cap or disk 16 such as nickel) of the first electrode).

Re claim 8, Germeshausen further teaches the end portion of the lamp body having rough surface for increasing adhesion between the end portion and the second portion (Col. 3, lines 30-35)

Re claims 12, 14, 15, 16 and 17, Germeshausen further discloses the second electrodes (i.e., at the opposite end) having the same structure as the first electrode (i.e., at one end). Therefore, claims 12, 14, 16 and 17 are rejected for the same reason given above for the structure of the first electrode as discussed above in claims 1, 5, 8, 9 and 10.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5, 7-10, 12 and 14-17 are rejected under 35 U.S.C. 103(a) as being obvious over Ge et al. (US 6,515,433) in view of Germeshausen (US 2,756,361).

Re claims 1, 5, 7, 9 and 10, Ge discloses a lamp (i.e., discharge lamp 100') for emitting light (Fig. 12) comprising:

a lamp body (i.e., tube or envelope 105) in which a discharge gas (107) is injected (Fig. 12; Col. 9, lines 21-49);

first and second electrodes (109, 110) disposed at opposite end (106) of the lamp body (105), the first and second electrodes (109, 110) receiving current externally provided (Fig. 12; Col. 9, lines 21-49), wherein the first electrode includes:

a first member (110) that receives a first end (106) portion of the lamp body (105), the first member (110) being electrically conductive (Fig. 12; Col. 9, lines 21-49; wherein the first member (110) of the first electrode has a tube shape (i.e., cup shape) having opposite ends of which one is open and the other is closed); and

a second member (109) disposed between the first member (110) and the lamp body (105), the second member (109) being coated on the first end portion of the lamp body to provide adhesion between the first member (110) and the lamp body (105) (Fig. 12; Col. 9, lines 21-49; wherein the second member of the first electrode is airtightly formed to prevent a void gap between the first member (110) and the lamp body (105); and wherein the size of entire inner surface of the first member (110) of the first electrode is substantially identical with a size of entire outer surface of the second member (109) of the first electrode).

Ge does not mention if the second member (109 maybe made of silver paste or other metal) of the first electrode having a melting point lower than a melting point of the first member (110) of the first electrode.

In the same field of endeavor, Germeshausen teaches of forming the second member (i.e., metal coating or layer 8 maybe silver or other metal) of the first electrode having a melting point lower than a melting point of the first member (i.e., metal cap or disk 16 such as nickel or other equivalent metal) for the purpose of preventing the first member (i.e., metal cap or disk 16) from being dissolved in the second member (i.e., metal coating or layer 8) (Figs. 2-10; Col. 2, lines 14-26 & 30-47; Col. 3, line 14- Col. 4, line 40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the first member (110) of the first electrode of Ge's by forming the first member of the first electrode made of nickel or other equivalent metal having a higher melting point than the second member (109) made of silver paste or other metal for the purpose of preventing the first member from being dissolved in the second member as taught by Germeshausen.

Re claim 8, Germeshausen further teaches the end portion of the lamp body having rough surface for increasing adhesion between the end portion and the second portion (Col. 3, lines 30-35).

Re claims 12, 14, 16 and 17, Ge further discloses the second electrodes (i.e., at the opposite end) having the same structure as the first electrode (i.e., at one end of the lamp body). Therefore, claims 12, 14, 15, 16 and 17 are rejected for the same reason given above for the structure of the first electrode as discussed above in claims 1, 5, 8, 9 and 10.

5. Claims 25, 32, 34, 35, 39, 46, 48-50, 52 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ge et al. (US 6,515,433) in view of Germeshausen (US 2,756,361

previously cited by examiner), and further in view of Cho et al. (US 6,674,250 previously cited by examiner).

Re claim 25, 34, 46 and 49, Ge discloses a light assembly for providing light to a display device having a display panel, comprising:

a lamp body (i.e., tube or envelope 105) in which a discharge gas (107) is injected (Fig. 12; Col. 9, lines 21-49);

first and second electrodes (109, 110) disposed at opposite end (106) of the lamp body (105), the first and second electrodes (109, 110) receiving current externally provided (Fig. 12; Col. 9, lines 21-49), wherein the first electrode includes:

a first member (110) that receives a first end (106) portion of the lamp body (105), the first member (110) being electrically conductive (Fig. 12; Col. 9, lines 21-49; wherein the first member (110) of the first electrode has a tube shape (i.e., cup shape) having opposite ends of which one is open and the other is closed); and

a second member (109) disposed between the first member (110) and the lamp body (105), the second member (109) being coated on the first end portion of the lamp body to provide adhesion between the first member (110) and the lamp body (105) (Fig. 12; Col. 9, lines 21-49; wherein the second member of the first electrode is airtightly formed to prevent a void gap between the first member (110) and the lamp body (105); and wherein the size of entire inner surface of the first member (110) of the first electrode is substantially identical with a size of entire outer surface of the second member (109) of the first electrode).

Ge does not mention if the second member (109 maybe made of silver paste or other metal) of the first electrode having a melting point lower than a melting point of the first member

(110) of the first electrode. In addition, Ge does not show a voltage applying module for receiving the driving voltage from an external source and providing the driving voltage to first and second electrodes of a lamp and a receiving container for receiving and securely holds the lamp and the voltage applying module.

In the same field of endeavor, Germeshausen teaches of forming the second member (i.e., metal coating or layer 8 maybe silver or other metal) of the first electrode having a melting point lower than a melting point of the first member (i.e., metal cap or disk 16 such as nickel or other equivalent metal) for the purpose of preventing the first member (i.e., metal cap or disk 16) from being dissolved in the second member (i.e., metal coating or layer 8) (Figs. 2-10; Col. 2, lines 14-26 & 30-47; Col. 3, line 14- Col. 4, line 40).

Cho discloses a display device having a display panel and a light assembly (Figs. 1-4) for providing light; a voltage applying module (Fig. 7) that receives the driving voltage from an external source and providing the driving voltage to the first and second electrodes of the lamp (Fig. 10); and a receiving container (Fig. 10) that receives and securely holds the lamp (10) and the voltage applying module (Fig. 7)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the first member (110) of the first electrode of Ge's by forming the first member of the first electrode made of nickel or other equivalent metal having a higher melting point than the second member (109) made of silver paste or other metal for the purpose of preventing the first member from being dissolved in the second member as taught by Germeshausen. Furthermore, it would have been obvious to further modify Ge's modified by Germeshausen light assembly for providing light to the display device with Cho's display device

including a voltage applying module and a receiving container for securely containing and providing driving voltage to the first and second electrodes of Ge's modified by Germeshausen light assembly for no other reason than displaying different type of information on the display panel.

Re claims 35, 50 and 53, Ge further discloses the second electrodes (i.e., at the opposite end) having the same structure as the first electrode (i.e., at one of the end). Therefore, claims 35, 50 and 53 are rejected for the same reason given above for the structure of the first electrode as discussed above in claim 25.

Re claims 32, 39, 48 and 52, Germeshausen further teaches the end portion of the lamp body having rough surface for increasing adhesion between the end portion and the second portion (Col. 3, lines 30-35).

6. Claims 26, 27, 36 and 37 are rejected under 35 U.S.C. 103(a) as being obvious over Cho Ge et al. (US 6,515,433) in view of Germeshausen (US 2,756,361 previously cited by examiner), further in view of Cho et al. (US 6,674,250 previously cited by examiner) and further in view of Yoo et al. (US 6,905,224 previously cited by Examiner).

Re claims 26, 27, 36 and 37, Ge's modified by Germeshausen and further modified by Cho's discloses all the claimed invention except first and second lamp clips for holding the first and second electrodes of the lamp, the first lamp clip being attached to the first frame, wherein the first and second frames, respectively, including upper and lower parts between which the first and second electrodes of the lamp, respectively being disposed; and a connection part connected with the upper and lower parts, the connection part having an opening through which the first electrode of the lamp is inserted.

However, it is well within the skill of artisan at the time the invention was made to provide such structural modification for the purpose of securely holding the light assembly and the display panel.

In the same field of endeavor, Yoo discloses such feature (Figs. 10-13).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the first and second frames of Ge's modified by Germeshausen and further modified by Cho's light assembly by providing clips as claimed in claims 26, 27, 36 and 37 for no other reason than securely holding the display panel and the light assembly.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 5-7, 9-12, 16-18, 25-28, 30-31, 33-38, 40, 41, 46, 49, 50 and 53 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 10/508,587 in view of Germeshausen (US 2,756,361).

The '587 co-pending application claims an image display device (LCD apparatus) for displaying images using light internally provided (as claimed in claim 18 of the '587 copending application claims), comprising:

- a display panel (LCD panel) to display images using the light and image data externally provided (in a manner claimed in claim 18 of the '587 copending application),

- a light assembly (lamp) to provide the light, the light assembly (in a manner claimed in claims 1 and 18 of the '587 copending application), comprising:

- a lamp including:

- a lamp body (lamp tube) in which a discharge gas is injected (in a manner claimed in claims 1 and 18 of the '587 copending application);

- first and second electrodes disposed at opposite end of the lamp body , the first and second electrodes receiving current externally provided, wherein the first electrode includes:

- a first member (electrode) that receives a first end portion of the lamp body (lamp tube), the first member being electrically conductive (in a manner claimed in claims 1 and 18 of the '587 copending application); and

- a second member (adhesive means) disposed between the first member (electrode) and the lamp body (lamp tube), the second member (adhesive means) having metallic solder and being coated on the first end portion of the lamp body to provide adhesion between the first

member (electrode) and the lamp body (lamp tube) (in a manner claimed in claims 1 and 18 of the '587 copending application; wherein the second member of the first electrode is airtightly formed to prevent a void gap between the first member and the lamp body).

The '587 co-pending application does not claim if the second member (silver adhesive) of the first electrode having a melting point lower than a melting point of the first member (electrode) of the first electrode.

In the same field of endeavor, Germeshausen teaches of forming the second member (i.e., metal coating or layer 8 maybe silver or other metal) of the first electrode having a melting point lower than a melting point of the first member (i.e., metal cap or disk 16 such as nickel or other equivalent metal) for the purpose of preventing the first member (i.e., metal cap or disk 16) from being dissolved in the second member (i.e., metal coating or layer 8) (Figs. 2-10; Col. 2, lines 14-26 & 30-47; Col. 3, line 14- Col. 4, line 40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the first member (electrode) of the first electrode of the '587 co-pending application by forming the first member of the first electrode made of nickel or other equivalent metal having a higher melting point than the second member (silver adhesive) for the purpose of preventing the first member from being dissolved in the second member as taught by Germeshausen.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

9. Applicant's arguments with respect to the art rejection have been considered but are moot in view of the new grounds of rejection.

Applicant's arguments with respect to the Germeshausen teaching filed 1/04/08 have been fully considered but they are not persuasive. In response to applicant argument that Germeshausen does not teach the second member having a melting point lower than a melting point of the first member of the first electrode member as presently claimed is respectfully disagreed. Germeshausen teaches of forming the second member (i.e., metal coating or layer 8) of the first electrode made from silver or other metal and the first member (i.e., metal cap or disk 16) being made of nickel or other equivalent metal for the purpose of preventing the first member (i.e., metal cap or disk 16) from being dissolved in the second member (i.e., metal coating or layer 8). Thus, the second member made of silver having a melting point lower than a melting point of the first member (i.e., metal cap or disk 16) made of nickel or other equivalent metal would have been inherent and/or obvious. Furthermore, Applicant's claimed invention also shows the first member being formed from nickel and the second member being formed from silver (see pages 10 and 11, lines 9-11 & 3-4, respectively).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Owens can be reached on (571) 272-1662662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EA

5/10/08

/Douglas W Owens/

Supervisory Patent Examiner, Art Unit 2821

May 10, 2008